

NOTES ON THE SOUTH AUSTRALIAN FLORA

Various Authors

Hypecoum pendulum L. (Papaveraceae) in South Australia

The first published report of the naturalization of *Hypecoum pendulum* L. (1753) in Australia appeared recently, when Aston (1976) described the collection of this species at Lake Boga in northern Victoria in 1970 and again at a second nearby locality in 1973 to 1975.

In 1966, two collections were made by B. Copley of *Hypecoum pendulum* (s.l.) in Section 125 of the Hundred of Tickera, northern Yorke Peninsula, South Australia (i.e. c. 60 km north-west of Port Wakefield). He reported that the species was common on a firebreak on mallee loam soil. It was less common over approximately 10 acres (4.05 ha.) of cultivated land. The annual rainfall in the area is c. 340 mm which is comparable with that in the Lake Boga region. No further collections have since been made in South Australia and it is not known whether or not it has persisted.

Aston outlined the taxonomy of the *H. pendulum* complex, which includes also *H. parviflorum* Kar. & Kir. (1842) and *H. trilobum* Trautv. (1884, p. 366). On advice from Tutin, co-author of the treatment of the genus in 'Flora Europaea' (Mowat & Tutin, 1964), she accepted the concepts of Cullen (1966), recognizing a single species with three varieties. The varietal status of the Victorian material was not stated, but it was suggested that the specimens combined characters of var. *parviflorum* (Kar. & Kir.) Krylov (1931) and var. *trilobum* (Trautv.) Cullen (1966, p. 25).

The Yorke Peninsula specimens agree well with Aston's description and the Victorian collections, except in flower size. The outer petals of the Victorian collections are 9-10.5 mm long and 10-11.5 mm broad, while those of the South Australian material are approximately 7 x 5 mm. In petal size the South Australian material appears to agree with *H. parviflorum* according to measurements given by Popov, (1937), but in shape rather with *H. trilobum*. Tutin's comments (quoted by Aston) that the Victorian specimens combine characters of both these taxa appears, therefore, to be even truer of the South Australian specimens.

Hypecoum differs from other genera of Papaveraceae recorded for South Australia by Black (1948) in having regular flowers, petals without spurs, 4 stamens, the style shortly 2-lobed at the apex, and capsule narrowly fusiform, indehiscent and with up to 10 seeds.

The following brief description is based on that of Aston and on the specimens from Yorke Peninsula.

Plant annual, glabrous, up to 40 cm high, with a strong curry-like odour even after drying; branches erect or ascending. *Leaves* usually less than 10 cm long, mostly basal, deeply and finely divided. *Pedicels* solitary at nodes or terminal, slender, thickening and lengthening to 2 cm long in fruit. *Sepals* 2, ovate, 2-2.5 mm long. *Petals* 4, yellow; the outer to 7 (-10.5) mm long and to 5 (-11.5) mm broad, distally (entire or) shallowly 3-lobed; inner 2 with several scattered purplish oblong spots, shorter than the outer petals, deeply 3-lobed. *Stamens* 4, opposite the petals, c. 6.5 mm long; anthers basifixed, each with a minute apical projection. *Ovary* slender; style bearing two very short divergent stigmas. *Capsule* narrowly fusiform, 4-6 cm long, 2.5-4 mm wide at the broadest part, pendulous from the apex of the recurved pedicel, hard, indehiscent. *Seeds* up to 10, 2-2.5 mm long.

SOUTH AUSTRALIA: Yorke Peninsula Region, northern boundary of Section 125, Hundred of Tickera, Copley 660 (AD, CANB), 772 (AD, E).

This species originates from southern Europe, south-western Asia and North Africa.

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Astragalus L. (Fabaceae) in South Australia

J. M. Black (1948) recorded a single species of *Astragalus*, *A. hamosus* L., in South Australia, occurring in the "Flinders Range from Baroota to Hawker." The species is now known from a wider area and a second species has been recorded.

Key to *Astragalus* species in South Australia.

1. Peduncles 3-5 cm long; legumes 2-5 cm long, strongly curved; hairs on stem and branches medifixed.....*A. hamosus*
1. Peduncles less than 0.5 cm long; legumes 1-1.5 cm long, straight and erect; hairs on stems and branches mainly basifixed.....*A. sesameus*

Astragalus hamosus L. (1753).

Since 1948 this species has been found in Eyre Peninsula, in the Eastern Region and in further localities in the Flinders Ranges Region:

SOUTH AUSTRALIA. Flinders Ranges Region: *J. M. Black s.n.* (AD 97338067), Hawker, 4.x.1916 & 18.x.1917, (31° 53'S, 138° 25'E); *J. M. Black s.n.*, (AD97338067), Baroota, 9.ix.1936, (32° 56'S, 137° 59'E); *R. L. Crocker s.n.* (ADW 45750), Hawker, 18.ix.1939; *R. D. Pearce s.n.* (ADW 42975); on roadside ca. 3 km south from Melrose to Gladstone, 23.ix.1973, (32° 51'S, 138° 12'E); *R. D. Pearce 2.*, (ADW 45180), Hawker, 15.ix.1974. Eyre Peninsula Region: *E. Kehn s.n.* (AD 97339016), Hundred of Glynn, 25.ix.1973, (approx. 33° 30'S, 136° 55'E); *E. Kehn s.n.* (ADW 42976), Near Cowell, 5.x.1973, (33° 41'S, 139° 59'E).

***Astragalus sesameus* L. (1753)**

In 1968 Mr. D. E. Symon collected this species near Mundy Creek in the Flinders Ranges Region. In 1973 it was collected three times near Yunta in the Eastern Region with a note on one specimen, that the species had occurred in the region for at least the previous ten years. Also in 1973 the author collected it in the Brookfield Zoo Wombat Reserve, Blanchetown (34°20'S, 139°30'E), in the Murray Region, where the plants were widespread in an area of about 1 hectare, some 2km east of the homestead on sandy soil in light scrub of *Atriplex suberecta* Verdoorn, *Bassia diacantha* (Nees) F. Muell., *Eremophila scoparia* (R. Br.) F. Muell., *Geijera linearifolia* (DC.) Benth., *Maireana excavata* (J. M. Black) P. G. Wilson and *Maireana pentatropis* (Tate) P. G. Wilson. Like the other localities where this species has been found, the Reserve had been a pastoral station, and the species may have been introduced accidentally with pasture seed. The Reserve has been established since 1971.

The species, the identification of which was kindly confirmed by Dr. C. Steinberg, Conservator of the Herbarium of the University of Florence, is native to the Mediterranean region of Europe, occurring from southern Portugal to southern Bulgaria, in Turkey and North Africa, (Chater, 1968). It is not known to be cultivated for either economic or ornamental purposes, and no record has been found of its occurrence in other states of Australia.

Plant an herbaceous annual; *stem* prostrate or ascending to 25 cm, 1-2.5 mm thick, pubescent. *Leaves* 3-8 cm long, imparipinnate; leaflets 15-27, oblong, ca. 1 cm long, grey pubescent on both sides. *Stipules* triangular, acute, 3-5 mm long, pubescent. *Flowers* 5-10, subsessile, each subtended by a narrow triangular acute pubescent bract, borne in dense, shortly pedunculate axillary raceme. *Calyx* up to 6 mm long; lobes narrow triangular, acute, as long as the narrow tube, long-pubescent, green. *Flowers* yellow or bluish, standard narrow, obovate, slightly longer than keel and calyx; wings long-clawed, lamina ovate, auriculate; keel obtuse with two auricles. *Stamens* adnate to the keel for two thirds of their length; upper stamen free. *Ovary* pubescent. *Legume* erect, 10-15 mm long, 3-4 mm broad, subsessile, cylindrical pubescent. *Seeds* angular ca. 1 mm across, olive-green.

SOUTH AUSTRALIA. Flinders Ranges Region: *D. E. Symon 5600*, (ADW 42977), creekline 24 km north-east of Mundy Creek, 15.viii.1968, (30°03'S, 138°38'E). Eastern Region: *J. Lewis s.n.* (ADW 42926), Yunta between road and railway line, 16.vii.1973, (32°35'S, 139°34'E); *A. Tiver s.n.* (ADW 43298), Spring Dam Station, via Tiverton, 3.ix.1973, (approx. 32°55'S, 139°40'E); *A. Tiver s.n.* (ADW 42978), Spring Dam Station, via Yunta, 9.ix.1973. Murray Region: *J. Z. Weber 3573*, (AD 97347096), Brookfield Zoo Wombat Reserve, Blanchetown, 2.x.1973.

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